



LATERNE INFORMATIONS-TECHNIK M. Hildebrandt

KayCode.EU	Technical Datasheet
Company:	LIT Laterne Informations-Technik
Project:	KAYCODE.EU KAYCODE.DE
Contact:	Dipl. Kfm. Marc Messer M.A.
Telephone:	+49 5721 99658 12
E-Mail	kaycode@laterne.de
Signature secured unique QR-Code (single source – certificate on item-level) for tamper-proof identification of documents and physical goods	
Used barcode-technology:	QR-Code which enables more than 6bn smartphones, tablets or other handheld-devices to read and check the code. Proprietary codes are possible, too.
Used signature technology:	The concept is not committed to a specific methodology. Due to the space restrictions e.g. on packaging or labels efficient signature-generation based on ECDSA might be beneficial.
5-step code distribution:	<ol style="list-style-type: none"> 1.) Registration and verification of every partner using KayCode services (entity-check) 2.) Generating of the needed amount of codes for a specific production-batch for the a.m. entity 3.) Distribution of the generated codes with their unchangeable header to the production line 4.) Physical marking of each single product that is produced on this line and related to a.m. batch 5.) EOLA: The codes get activated at the production site after the last production step (End-of-Line Activation) e.g. during the last Quality-check on item-level (Optional security feature)
Code-Tracing (Track & Trace):	<p>Each site-visit of the website that is connected to the product (item-level) is tracked, protocolled and analyzed. Location-, device- and user-specific data is collected according to German laws.</p> <p>Any unexpected change compared to a well-formed data-trail of the scanned item or the multiple use of a code in a certain period of time in different places can be detected.</p>
Security (KayCode):	The KayCode itself contains besides the signature and some obvious product-data (payload) no other data.



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<p>Security (KayCode-Webservice):</p>	<p>The link-data related to each code is stored on German webservers that can be reached over the web link provided by the KayCode. The partner can provide additional data for this web link which will stay under his control at any time.</p>
<p>Creation of needed pay-load:</p>	<p>By default the KayCode is created from the production-data of each item (Producer, product, batch, production-site, time, date, etc.) combined with a unique identifier (UID) and everything gets digitally signed.</p>
<p>Payload data:</p>	<p>The payload can contain up to 4kB of data</p>
<p>In-line creation of payload & signature: "On-the-fly"</p>	<p>During this procedure each item gets checked (scanned, x-rayed, measured, etc.) during the production process to generate related data for each item. This set of information is blended with other immutable characteristics into the signed KayCode. As each KayCode is exclusively related to a unique website this information is available for later comparison by design.</p>
<p>EOLA – End-of-Line Activation</p>	<p>The EOLA-procedure offers as additional safety-layer the activation of each code at the end of the production. This guaranties that only used codes which are already blended into the product can be active. Only active codes will link to the related website and show the related data for the specific item.</p>

This Kay-Code will link you to the latest presentations and data-sheets:



This link will guide you to the latest presentations and data-sheets:

<http://kaycode.eu/i/s7jabq77tju0pehm2sg4tdva9ye4rpi0ztssfmsyobglznm5ufw753z7t5almcnyym5efs4s252c3py>